RE-CONNECTING NATURE

SKINCARE · HAIRCARE · MAKEUP

THE WORLD'S FIRST NATURAL COSMETIC INGREDIENT WITH THE UNIQUE MICROBIOME-RESTORING PROPERTIES OF THE FINNISH FOREST

BEGIN

UUTE SCIENTIFIC

Patent numbers: EP: 3551196A1, US: 11318173B2

RE—CONNECTING NATURE™

THE RICHES OF FINNISH NATURE CAN NOW BE SHARED

MEET RE-CONNECTING NATURE®, THE MICROBIAL EXTRACT BRINGING THE RESTORATIVE POWER OF FINNISH NATURE TO CONSUMER PRODUCTS.

We all know that modern living can make it hard to get close to nature. But the fact is, without exposure to microbial diversity, the immune system can get out of practice, leaving us prone to the immune-mediated diseases that are common in urban societies.

Our pioneering ingredient, developed at the Universities of Tampere and Helsinki, aims to redress this balance; replicating the microbial diversity of Finnish nature so that its scientifically proven benefits can be shared in premium skincare, haircare and makeup.

Natural resilience for deeply beautiful skin

THE SCIENTIFICALLY PROVEN BENEFITS

Re-Connecting Nature® is scientifically proven to **stimulate the immune system** and recreate a **more natural balance**; one that's associated with **enhanced skin health, resilience, comfort and appearance**.

This balance actively promotes skin integrity for **enhanced barrier function**, **faster regeneration and repair, reduced redness and irritation and increased levels of age-defying collagen**.

What's more, this 'world-first' ingredient is safe and easy to integrate into a range of products, meaning consumers can access the immunity-boosting diversity of nature, wherever they live.

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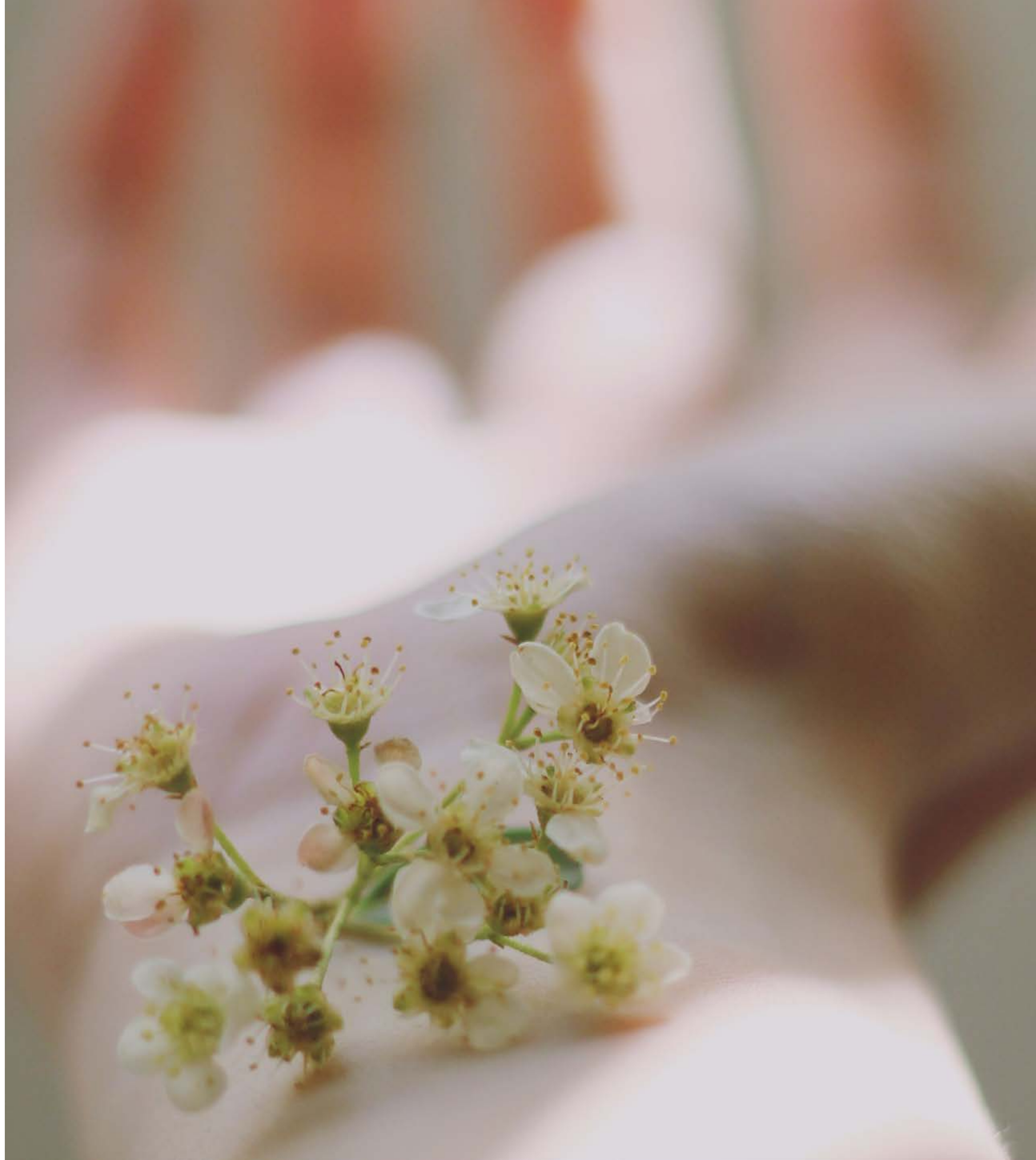

A quiet word on Finland

You won't find a Finn bragging about Finland (or anything else for that matter), but with 75% of the land covered in forest, and a further 10% in lakes and rivers, it's easy to see why the country reports some of the highest levels of happiness in the world.

And below the surface, things get even more interesting.

Add in some of the **world's purest air, water, and ultra-cleansing frozen winters**, and you have a granite soil so rich in microbial diversity that it can **actually promote health**.

Don't live near Finland? Not a problem. Uute Scientific have worked out how to share it in a world first ingredient...

LEARN ABOUT THE INGREDIENT

To microbial diversity what Champagne terroir is to sparkling wine

The purity of Finland's land, air and water together with stringent legislation means the country has the **lowest number of antibiotic resistance genes in the world**. Combining this with the long, cold, pathogen-eliminating winters makes Finnish soil **unique**.

OUR STORY

The idea of a biodiversity power came to our founding partners while out hiking. Aki recalls:

“A few years back I was wandering with my good friend Olli in a stretch of forest between our homes. Our boys were paddling in the water and there was a wonderful sense of peace, despite all their chatter. Looking at their muddy hands and faces - and knowing the wealth of good it was doing for their immune systems - I said: ‘I wish I could bottle this for people in cities.’ So that's what we did.”

Aki Sinkkonen

Uute Scientific Oy’s
Co-founder and
Scientific Advisor
Director of the ADELE
research group

Docent of
Environmental Ecology

Olli Laitinen

Uute Scientific Oy’s
Co-founder and
Scientific Officer

Docent of
Molecular Virology

The riches of Finnish nature, in your hands

INTRODUCING OUR HUMUS EXTRACT

It's a natural, sustainably-produced active ingredient for face, body and haircare products.
Click an icon opposite to find out more

Sustainable ingredients	As nature lovers, we would never dream of digging up the forest floor. Instead, we source our raw materials from the wider world. Most are recycled or renewable and all are from sustainable sources and reputable partners. Each one is carefully selected based on its unique bacterial composition and other characteristics.
Diversity of natural bacteria species	Our unique ingredients are carefully combined to replicate the rich diversity of hundreds of species found in Finnish nature. This includes Actinobacteria, Acidobacteria, Bacteroidota, Proteobacteria, Firmicutes and many more.
Plant species	Multiple plant species provide the starting materials for our rich composts. Many are side streams from industry that would otherwise be wasted.

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Why microbes matter

STRENGTH IN DIVERSITY

We're quietly very proud of our brand-new-to-the-world ingredient, but the real credit should go to the microbes.

In addition to (friendly) bacteria, Re–Connecting Nature is formulated using unicellular non-nuclear micro-organisms, genuine nuclear microbes and slow-growing microbes that **cannot be grown under laboratory** conditions.

But the real strength comes from the sheer diversity of microbes involved*. Unlike probiotic products, which typically contain just a few species, our microbial extract contains thousands, including bacteria, archaea and eukaryotes.

Together, this diverse spectrum provides the immune system with a complex stimulus; something that can't be achieved by just a few species. It all adds up to a more natural balance; one associated with **enhanced skin health, resilience, comfort and appearance**.

*Thanks, Finland!

Urbanisation & sanitisation

THE PRICE OF MODERN LIFE

Tackling the global auto-immune health crisis

THE SHIFT TO IMMUNOCOSMETICS

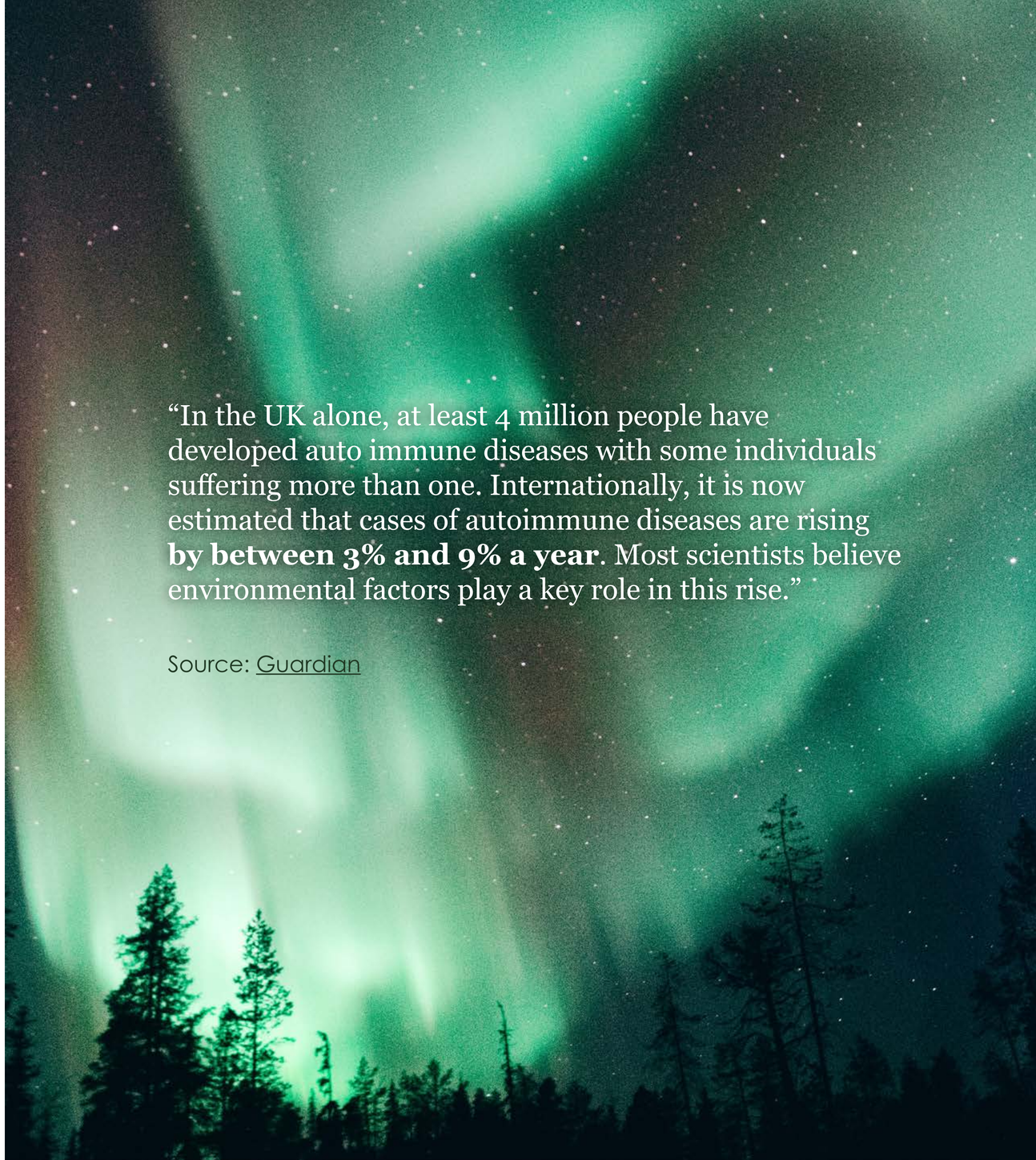
Consumers are now looking for health enhancing beauty products with proven clinical efficacy.

We are pioneers in an entirely new category "***Immunocosmetics***", where beauty and immunity connect.

Consumers are driving the growth trend in beauty and immunity for ultimate physical and mental wellness.

A cohort of "wellness and immune seekers" emerged in 2020 that are the most engaged and educated users of immune supporting products, including supplements and wellness-based beauty products.

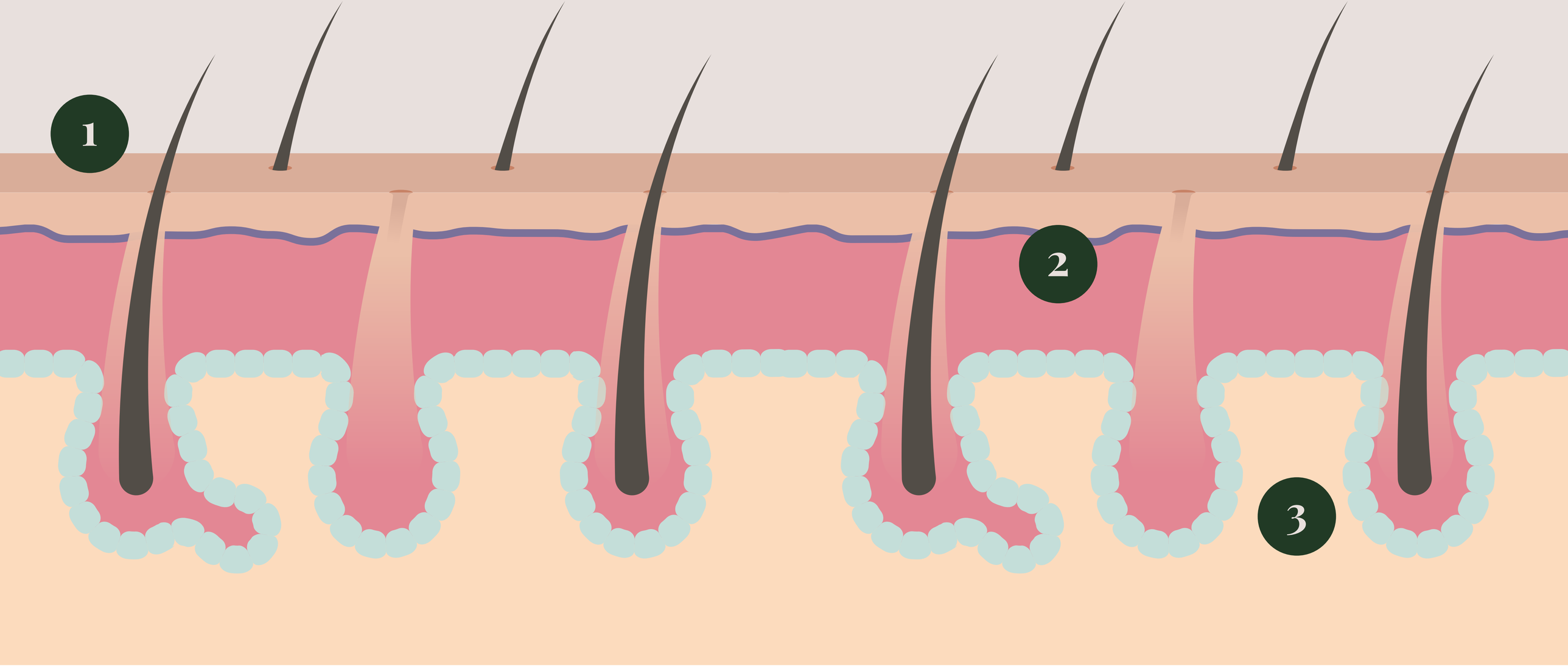
Re–Connecting Nature® is the only patented wellness ingredient from nature that offers thousands of diverse microbes for these wellness urbanities globally.



"In the UK alone, at least 4 million people have developed auto immune diseases with some individuals suffering more than one. Internationally, it is now estimated that cases of autoimmune diseases are rising **by between 3% and 9% a year**. Most scientists believe environmental factors play a key role in this rise."

Source: Guardian

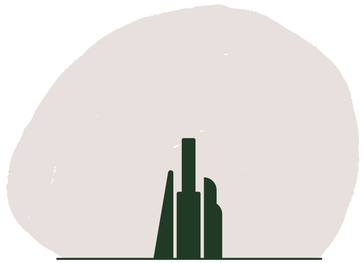
THE SKIN AND ITS MICROBIOME



BIODIVERSITY ON OUR SKIN

1 2 3 4

Natural rural environment



Urban environment

Re–Connecting Nature® is growing

SEE OUR CUSTOMERS' AWARDS

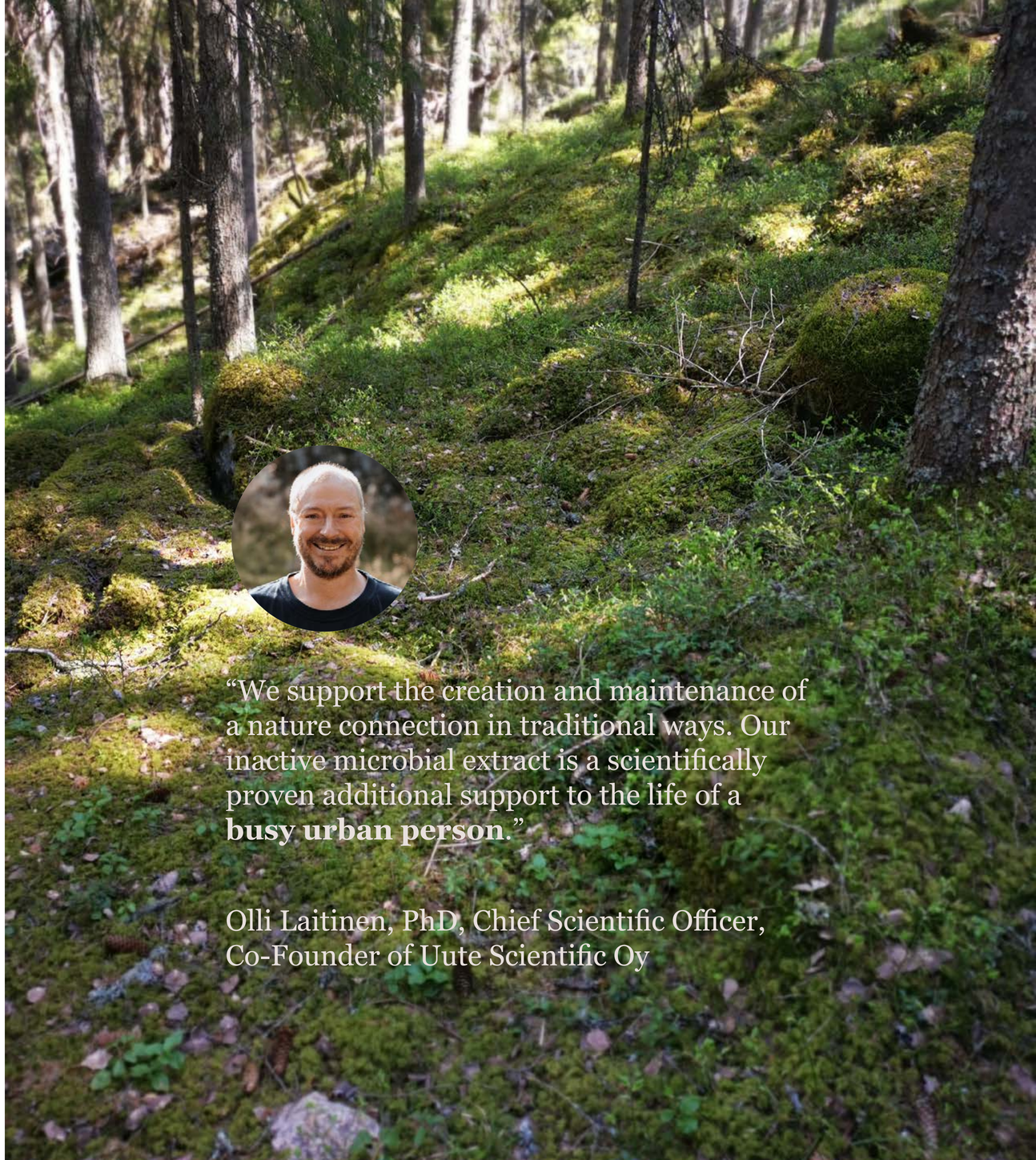
Re-Connecting Nature® is scientifically proven to stimulate the immune system and recreate a more natural balance; one that's associated with enhanced skin resilience, comfort and appearance.

See where it's being used already and start planning how you'll add its unique benefits to your products.

Õrn Kuu ›

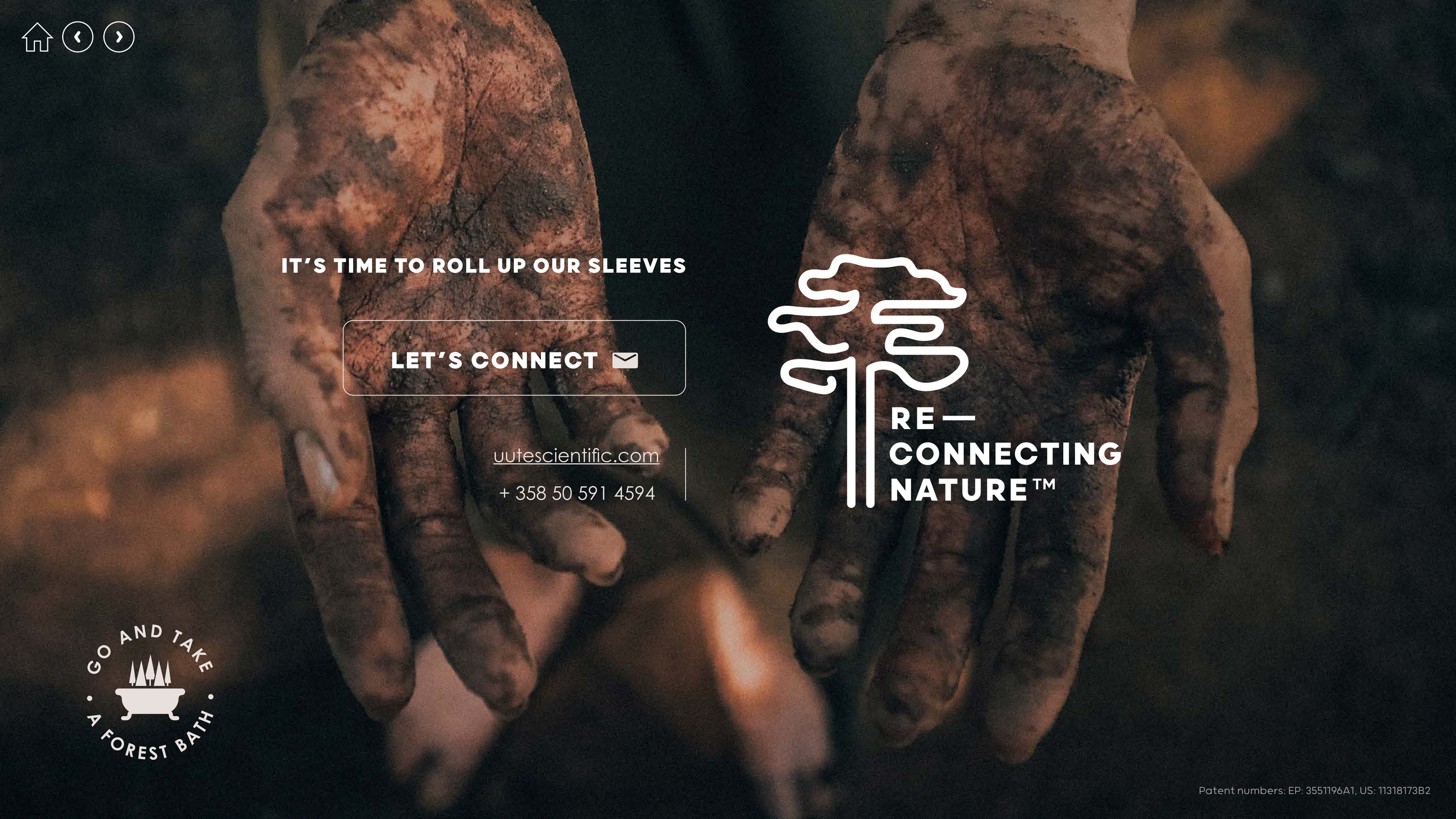
Luonkos ›

Moi Forest ›



"We support the creation and maintenance of a nature connection in traditional ways. Our inactive microbial extract is a scientifically proven additional support to the life of a **busy urban person**."

Olli Laitinen, PhD, Chief Scientific Officer, Co-Founder of Uute Scientific Oy



IT'S TIME TO ROLL UP OUR SLEEVES

LET'S CONNECT

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RE—
CONNECTING
NATURE™

GO AND TAKE
A FOREST BATH

Patent numbers: EP: 3551196A1, US: 11318173B2

SCIENTIFIC FOUNDATION 1/2: IN BRIEF

- Re–Connecting Nature™ extract at recommend concentrations helps in restoring natural microbiome balance
- High levels of pro-inflammatory cytokines, especially TNFα, IL-4, IL-13 and IFN-g, has been linked to impaired function of skin barrier. (1,2,3,4,5,6,7). Decreasing levels of pro-inflammatory cytokines supports the skin barrier function.
- The barrier function of the skin begins to fail, and a reduced rate of epidermal barrier repair is observed after age 55.
  Aging skin has a chronic low-grade inflammation (8). TNFa inhibits collagen formation and enhances collagen degradation.(9).
  Reducing amount of pro-inflammatory cytokines, like TNFa, helps maintaining skin barrier and collagen production in aging skin.
- A decrease in IFN-g leads to an increase in cell proliferation which means faster skin regeneration and repair. (1, 10)

Instant effect:

- UV-radiation induced sunburn reactions culminate from inflammatory events like production of TNFa and IL-1b. (11). Lowering levels of these pro-inflammatory cytokines may reduce redness and irritation caused for example by sunburn.

See over for related studies

SCIENTIFIC FOUNDATION 2/2

With today's increased sanitisation and urban living, our skin's natural microbial diversity has been significantly reduced. Exposure to nature's rich biodiversity is essential for the immune system to function correctly. Re-Connecting Nature® microbial extract is an easy way to renew this exposure.

Previous studies have found that repeated exposure to nature's biodiversity lowers levels of pro-inflammatory cytokines* and induces immune system changes that have been linked to a lower risk of immune-mediated diseases.

Uute Scientific's experiment was carried out by a partner using an artificial model. Three different bacteria (S. epidermis, C. striatum and C. acnes) which are naturally occurring on skins microbiome were present. Although normally the skin has a much higher number of microbes, the purpose of this model was to represent normal skin.

In the second model, an opportunistic pathogenic S. aureus bacterium was added to model the situation in, for example, atopic dermatitis. **The effect of the Re-Connecting Nature™** microbial extract on the microbiome of the skin model, on proteins important for the protective layer and on cytokines was investigated. According to a study of the extract, it could be a solution to a wide range of skin problems. "We were surprised at how versatile the raw material is. Especially in presence of S. aureus, the extract showed a statistically significant reduction in the levels of seven pro-inflammatory cytokines," said project leader Johanna Kalmari. "We are very excited about this result. Our extract may even help people with atopic dermatitis."

The powder was used in **four different concentrations** (0.5%, 1%, 5% and 10%). Based on the microbiological results, we recommend a new maximum concentration of 4% in the products. In this case, the powder has a neutral or prebiotic effect on the growth of the normal skin microbiome and a neutral effect on the growth of pathogens. The number of proteins is important for the protective layer of the skin (Loriclin, Claudin, Filaggrin, Ki67) was not affected by the extract.

In a normal-skin model, the microbial extract mixed with the ointment showed a statistically significant **decrease in the levels** of five pro-inflammatory cytokines (IL-4, IL-12p70, IL-13, TNFα, IFNγ) compared to the control ointment. In a situation modelling atopic dermatitis, the extract statistically significantly decreased the levels of seven pro-inflammatory cytokines (in addition to the above-mentioned IL-1β, IL-2).

A decrease in the skin barrier has been associated with high levels of IL-4, IL-13, TNFα, IFNγ cytokines in several studies. A decrease in these cytokines **supports the function of the skin barrier**. The function of the barrier layer and skin regeneration begin to decline with age, and low-grade inflammation has been observed in ageing skin. In addition, high levels of TNFα have been shown to inhibit collagen production and high levels of IFNγ inhibit skin regeneration and repair. Reducing the levels of these cytokines supports normal skin functions such as **protective layer function**, **regeneration repair** and **collagen production**. Supporting the immune system is also particularly beneficial for ageing skin and in situations where the skin is irritated. Reducing the levels of the above cytokines also helps to **reduce skin irritation and redness** associated with, for example, sunburn.

**Cytokines are proteins produced by immune cells and epithelial cells such as skin keratinocytes that regulate immune responses.*

SCIENTIFIC STUDIES

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MORE SCIENTIFIC INFORMATION